

further when with Green, and further when with Blew, and go yet further off when illuminated with Indigo, and furthest when with deep Violet. Which plainly shews, that the Lights of several Colours are more and more Refrangible one than another, in this order of their Colours, Red, Orange, Yellow, Green, Blew, Indigo, deep Violet; and so proves as well the first Proposition as the second.

Fig. 17. I caused also the coloured Spectrums P T and M N made in a dark Chamber by the Refractions of two Prisms to lye in a right Line end to end, as was described above in the fifth Experiment, and viewing them through a third Prism held Parallel to their length, they appeared no longer in a right Line, but became broken from one another, as they are represented at *pt* and *mn*, the violet end *m* of the Spectrum *mn* being by a greater Refraction translated further from its former place M T than the red end *t* of the other Spectrum *pt*.

Fig. 20. I further caused those two Spectrums P T and M N to become co-incident in an inverted order of their Colours, the red end of each falling on the violet end of the other, as they are represented in the oblong Figure P T M N; and then viewing them through a Prism D H held Parallel to their length, they appeared not co-incident as when viewed with the naked Eye, but in the form of two distinct Spectrums *pt* and *mn* crossing one another in the middle after the manner of the letter X. Which shews that the red of the one Spectrum and violet of the other, which were co-incident at P N and M T, being parted from one another by a greater Refraction of the violet to *p* and *m* than of the red to *n* and *t*, do differ in degrees of Refrangibility.

I illuminated also a little circular piece of white Paper all over with the Lights of both Prisms intermixed, and
when

when it was illuminated with the red of one Spectrum and deep violet of the other, so as by the mixture of those Colours to appear all over purple, I viewed the Paper, first at a less distance, and then at a greater, through a third Prism; and as I went from the Paper, the refracted Image thereof became more and more divided by the unequal Refraction of the two mixed Colours, and at length parted into two distinct Images, a red one and a violet one, whereof the violet was furthest from the Paper, and therefore suffered the greatest Refraction. And when that Prism at the Window which cast the violet on the Paper was taken away, the violet Image disappeared; but when the other Prism was taken away the red vanished: which shews that these two Images were nothing else than the Lights of the two Prisms which had been intermixed on the purple Paper, but were parted again by their unequal Refractions made in the third Prism through which the Paper was viewed. This also was observable that if one of the Prisms at the Window, suppose that which cast the violet on the Paper, was turned about its Axis to make all the Colours in this order, Violet, Indigo, Blew, Green, Yellow, Orange, Red, fall successively on the Paper from that Prism, the violet Image changed Colour accordingly, and in changing Colour came nearer to the red one, until when it was also red they both became fully co-incident.

I placed also two paper circles very near one another, the one in the red Light of one Prism, and the other in the violet Light of the other. The circles were each of them an Inch in Diameter, and behind them the Wall was dark that the Experiment might not be disturbed by any Light coming from thence. These circles thus illuminated, I viewed through a Prism so held that the Refraction might be made towards the red circle, and as I went from them
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